

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Previously Presented) A method of operating a multistage modulating boiler system, the multi-stage modulating boiler system including two or more stages of modulating boilers, the multi-stage modulating boiler system adapted to provide heat to a circulating fluid heated by the multi-stage modulating boiler system and to maintain a first temperature setpoint, the method comprising:

receiving an indication that a stage of the multi-stage modulating boiler system should be activated and whether the stage is currently a first stage of the multi-stage modulating boiler to be activated;

receiving a normal firing rate for the stage, the normal firing rate is based on an error signal that is related to a deviation between the first temperature set point and a temperature of the circulating fluid in the multi-stage modulating boiler system;

activating the stage at the normal firing rate if the stage is not the first stage of the multi-stage boiler to be activated;

activating the stage at a first firing rate if the stage is the first stage of the multi-stage boiler to be activated, wherein the first firing rate is less than the normal firing rate;

maintaining the first firing rate for a period of time unless a predefined condition that is related to a system temperature occurs during the period of time; and

activating the stage at the normal firing rate after the period of time expires.

2. (Previously Presented) The method of claim 1 wherein the predefined condition includes when the temperature of the circulating fluid in the multi-stage modulating boiler system drops below a predetermined level.

3. (Previously Presented) The method of claim 1 wherein the predefined condition includes when a rate of change for a sensed temperature for the circulating fluid in the multi-stage modulating boiler system rises above a predetermined level.

4. (Previously Presented) The method of claim 1 wherein:
the multi-stage modulating boiler system includes a modulating boiler stage for heating the circulating fluid, the modulating boiler stage having a primary heat exchanger and a bypass temperature sensor for sensing a bypass temperature of the circulating fluid entering the primary heat exchanger; and

the predefined condition includes a likelihood of condensation within the primary heat exchanger of the modulating boiler stage.

5. (Original) The method of claim 4 wherein the likelihood of condensation is predicted based upon sensing of the bypass temperature.

6. (Previously Presented) The method of claim 4 wherein:
the modulating boiler stage includes a secondary heat exchanger associated with the primary heat exchanger and an inlet temperature sensor for sensing an inlet temperature of the circulating fluid entering the secondary heat exchanger; and

the likelihood of condensation is predicted based upon sensing of the inlet temperature.

7. (Previously Presented) The method of claim 1 wherein the first firing rate is set independent of the normal firing rate.

8-23. (Canceled)